IN THE CLAIMS

Please amend the claims as indicated hereafter.

1-44 (CANCELED)

45. (PENDING) A method of metallizing a nanostructure, comprising the steps of: forming a nanosphere; metallizing the nanosphere with a metal; and forming a metallized nanosphere that has been metallized with the metal.

46. (PENDING) The method of claim 45, wherein the step of metallizing the nanosphere with the metal, includes metallizing a nanosphere with copper.

47. (PENDING) The method of claim 45, wherein the step of forming the metallized nanosphere, includes the step of forming a metallized copper nanosphere that has been metallized with about 3 weight percent copper.

48. (PENDING) The method of claim 45, wherein the step of metallizing the nanosphere with a metal, includes the step of metallizing a nanosphere with a metal selected from the group consisting of: copper, tin, aluminum, silver, platinum, palladium, iron, cobalt, and nickel.

49. (PENDING) The method of claim 45, wherein the step of forming the metallized nanosphere, includes the step of forming a metallized metal nanosphere, wherein the metal is selected from the group consisting of: copper, tin, aluminum, silver, platinum, palladium, iron, cobalt, and nickel.

50. (PENDING) The method of claim 45, wherein forming the nanosphere includes the step of forming a nanosphere under thermal conditions.

51. (CURRENTLY AMENDED) The method of claim 50, wherein the step of forming the ~~nanowire~~ nanosphere under thermal conditions comprises the step of forming a ~~nanowire~~ nanosphere in the temperature range of about 800 °C to about 1500 °C.

52. (PENDING) The method of claim 45, wherein forming the nanosphere includes the step of forming a nanosphere under non-catalytic conditions.

53. (CANCELLED)

54. (NEWLY ADDED) A method of preparing a nanosphere, comprising the steps of:

providing at least one composition selected from the group consisting: of a metal composition, a metal oxide composition, and combinations thereof, wherein the metal of the metal composition and the metal of the metal oxide are selected from the group consisting of: tin, chromium, iron, nickel, silver, titanium, cobalt, zinc, platinum, palladium, osmium, gold, lead, iridium, molybdenum, vanadium, and aluminum;

exposing the composition to thermal conditions of about 800°C to about 1500°C and at a pressure from about 200 to 650 Torr;

vaporizing the composition while flowing an inert gas over the composition;

forming a plurality of substantially monodisperse metal oxide nanospheres via a condensation reaction under non-catalytic conditions; and

metallizing the nanosphere with a metallization metal selected from the group consisting of: tin, iron, nickel, silver, cobalt, platinum, aluminum, and copper by contacting the nanospheres with a solution including a metallization metal complex.